

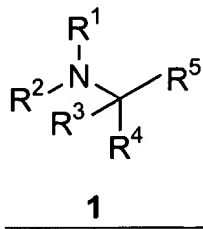
Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

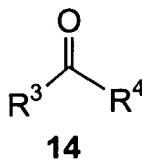
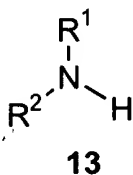
1-11. (Canceled).

12. (Previously presented) A combinatorial library of, comprising a plurality of compounds ~~wherein the plurality of compounds in the combinatorial library are~~ represented by formula 1:

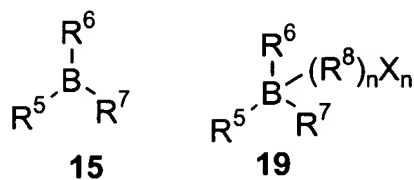


wherein

the compounds are prepared by a process comprising: providing compounds  
reacting an amine represented by of formula 13 and a carbonyl represented  
by formula 14



with an organoborane represented by formula 15 or formula 19



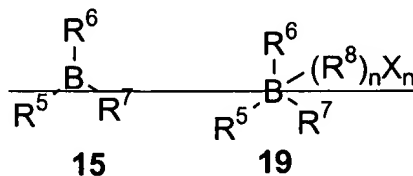
thereby forming the compounds represented by formula 1;

wherein

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, hydroxy, alkoxy, aryloxy, heteroaryloxy, acyl, acylalkyl, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, alkylthio, arylthio, acylthio, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, alkylsulfonyl, arylsulfonyl, and -YR, where Y is selected from the group consisting of -O-, -NR<sub>a</sub>-, -S-, -SO-, and -SO<sub>2</sub>-, and R and R<sub>a</sub> are each independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, and acyl, or R<sup>1</sup> and R<sup>2</sup> together form a methylene bridge of 2 to 20 carbon atoms, provided that the compound of formula 13 is a primary or secondary amine; and where

R<sup>3</sup> and R<sup>4</sup> are each independently selected from the group consisting of hydrogen, carboxy, carboxamido, alkyl, cycloalkyl, aryl and heteroaryl, provided that the compound of formula 14 is not paraformaldehyde;

~~providing compounds of formula 15 or formula 19~~



where

R<sup>5</sup> is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl and allenyl;

$R^6$ ,  $R^7$  and  $R^8$  are selected from the group consisting of hydroxy, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl, or together form a methylene bridge of 3 to 7 atoms;

each alkyl is optionally substituted with one or more groups selected from the group consisting of C1-C6 alkyl, C3-C6 heterocycle, aryl, halo, hydroxyl, alkoxy, and sulfonyl;

each aryl is optionally substituted with aryl or lower alkyl;

X is a positive counter ion, and

n is 0 or 1[[;]],

~~mixing said compounds of formula 13, formula 14, and formula 15 or 19 to form a reaction mixture; and~~

~~allowing the reaction mixture to react to form the compound in the combinatorial library~~

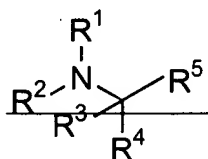
wherein the combinatorial library comprises the compounds as:

a mixture;

an array having each compound located at a different position at a substrate, at least one of the compounds being coupled to the substrate through  $R^1$  or  $R^2$ ; or

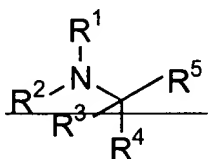
a set of sub-pools of the compounds, wherein the compounds within each sub-pool are prepared from the same amine represented by formula 13 the same carbonyl represented by formula 14, or the same organoborane represented by formula 15 or formula 19.

19. (Currently amended) The combinatorial library of claim 12, wherein the combinatorial library comprises the compounds as the set of the sub-pools of the compounds.  
~~the said combinatorial library is prepared by reacting a plurality of different compounds of one or more of formula 13, formula 14, formula 15 and/or formula 19 to generate a plurality of compounds of formula 1:~~



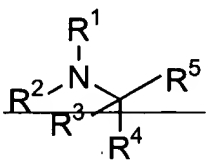
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20. (Currently amended) The combinatorial library of claim 12, wherein the combinatorial library comprises the compounds as the mixture.  
~~the said combinatorial library includes a mixture of different compounds of formula 1:~~



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- ~~said mixture being prepared from a reaction mixture including a plurality of different compounds of one or more of formula 13, formula 14, formula 15, and/or formula 19.~~
21. (Currently amended) The combinatorial library of claim ~~[[18,]]~~12, wherein the combinatorial library comprises the compounds as the array. wherein:  
~~said combinatorial library includes a plurality of different compounds of formula 1:~~



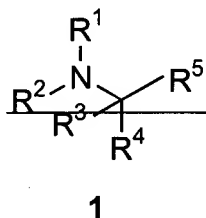
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~~each of the plurality of different compounds of formula 1 being located at a different position in an array.~~

Claims 22-33 (Canceled)

34. (Withdrawn) The combinatorial library of claim 12, wherein:  
said reaction mixture includes at least one compound of formula **14** for which R<sup>3</sup> is  
hydroxyaryl and at least one of the compounds of formula **1** is an amino phenol.

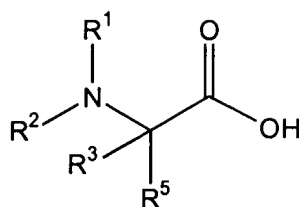
35. (Currently amended) The combinatorial library of claim 12, wherein at least one of the compounds is present in diastomeric excess or enantiomeric excess.  
~~at least one of the compounds of formula 13, 14, 15 or 19 is chiral and the combinatorial library includes at least one of the compounds of formula 1 that is produced stereoselectively:~~



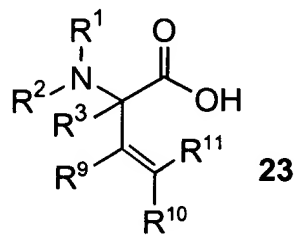
36. (Currently amended) The combinatorial library of claim 35, wherein at least one of the compounds is present in diastomeric excess of more than 99% or enantiomeric excess of more than 99%.

~~19, wherein: said combinatorial library is further prepared by transforming one or more of the plurality of compounds of formula 1 to generate the combinatorial library.~~

37. (Currently amended) The combinatorial library of claim 12, wherein the combinatorial library includes a plurality of  $\alpha$ -amino acid derivatives of represented by the following formula:

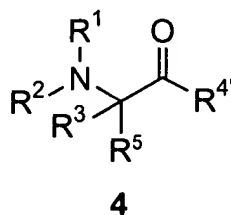


38. (Currently amended) The combinatorial library of claim 12, wherein the combinatorial library includes a plurality of  $\beta,\gamma$ -unsaturated- $\alpha$ -amino acid derivatives of represented by formula 23:



wherein  $R^9$ ,  $R^{10}$  and  $R^{11}$  are selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl, allenyl, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, and acylthio.

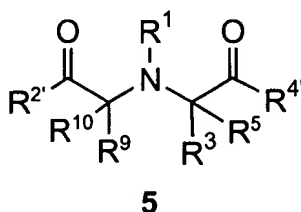
39. (Currently amended) The combinatorial library of claim 12, wherein the combinatorial library includes a plurality of  $\alpha$ -amino carbonyl derivatives of represented by formula 4:



wherein  $R^{4'}$  is selected from the group consisting of hydrogen, hydroxy, alkoxy, aryloxy, heteroaryloxy, carboxy, amino, alkylamino, dialkylamino, acylamino,

carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl.

40. (Withdrawn) The combinatorial library of claim 12, wherein:  
the combinatorial library includes a plurality of N-carboxymethyl amino acid derivatives  
of formula 5:

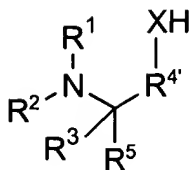


where R<sup>2'</sup> is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, hydroxy, alkoxy, aryloxy, heteroaryloxy, acyl, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, alkylthio, arylthio, acylthio, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, alkylsulfonyl and arylsulfonyl, and R<sup>1</sup> and R<sup>2'</sup> can be connected together to form a bridge of 2 to 20 atoms;

R<sup>4'</sup> is selected from the group consisting of hydrogen, hydroxy, alkoxy, aryloxy, heteroaryloxy, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl; and

R<sup>9</sup> and R<sup>10</sup> are selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, acyl and carboxy, and R<sup>9</sup> and R<sup>10</sup> can be connected together or with other groups to form a bridge of 3 to 7 atoms.

41. (Withdrawn) The combinatorial library of claim 12, wherein:  
the combinatorial library includes a plurality of 1,2-diamines and/or 1,2-amino alcohols  
of formula 29:



**29**

where R<sup>4'</sup> includes at least one carbon atom; and

X is selected from the group consisting of -O-, -NR<sub>a</sub>-, and -S-, where R<sub>a</sub> is selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, acyl, hydroxy, alkoxy, aryloxy, heteroaryloxy, amino, alkylamino, dialkylamino, and acylamino.

42. (Withdrawn) The combinatorial library of claim 12, wherein:

the compound of formula **14** is a carbohydrate selected from the group consisting of ribose, arabinose, xylose and arabinose; and  
the combinatorial library includes a plurality of amino sugars.

43-44 (Canceled)